

APPARATUS FOR PRODUCING HYDROGEN

ABSTRACT OF THE DISCLOSURE

The invention relates to an apparatus for producing hydrogen. Said apparatus comprises a reformer stage for converting hydrocarbon gas and water to hydrogen and other reformed products. At least one of the catalyst stages mounted downstream of the reformer stage is provided for the catalytic conversion of the reformed products. The apparatus also comprises a methanation stage which is mounted downstream of the catalyst stage and through which the medium flows in an axial direction. A flow guidance housing for a coolant extends in the axial direction of flow and is associated with said methanation stage. According to the invention, the flow guidance housing comprises at least two, preferably three or more cooling zones which have different cooling effects and which are disposed one after the other in the axial direction.